CLAIMS

1. A receiver circuit comprising:

a light detector arranged to provide an output signal that varies based upon the intensity of light measured thereby;

a constant bias circuit arranged to supply a reverse voltage across said light detector, said reverse voltage remaining substantially constant irrespective of said output signal;

a signal filter coupled to said light detector arranged to filter said output signal; and;

an amplifier arranged to amplify said output signal filtered by said signal filter.

2. A receiver circuit comprising:

a photocell having a cathode and an anode, said anode coupled to ground potential, said photocell arranged to provide a photocell output signal that varies based upon a measured intensity of light;

a first operational amplifier having:

a non-inverting input coupled to a first reference voltage;

an inverting input coupled to said cathode of said photocell;

an output; and,

a filter circuit connected between said inverting input and said output, said filter circuit configured to filter at least a portion of said photocell output signal; and,

an amplifier coupled to said cathode by a capacitor.

3. A receiver circuit according to claim 2, wherein said filter comprises a low pass filter.

4. A receiver circuit according to claim 2, wherein said filter comprises an inductor connected between said inverting input and said output defining a negative feedback loop.

5. A receiver circuit according to claim 4, wherein said first operational amplifier further comprises a capacitor in parallel with said inductor in said negative feedback loop.

6. A receiver circuit according to claim 2, wherein said amplifier comprises a second operational amplifier having an inverting input coupled to the cathode of said photocell by said capacitor, and a resistor in a negative feedback configuration.

7. A receiver circuit according to claim 2, wherein said first reference voltage coupled to said non-inverting input of said first operational amplifier is set to a voltage between zero volts, and a positive rail voltage that supplies power to said first operational amplifier.

8. A receiver circuit according to claim 2, wherein said photocell is arranged to detect light within a predetermined frequency range, and said filter circuit comprises a filter circuit configured to filter said photocell output signal outside said predetermined frequency range.

9. A receiver circuit according to claim 2, wherein said photocell output signal varies in proportion to the intensity of light impinging upon said photocell.

10. A receiver circuit according to claim 9, wherein said photocell is configured to detect amplitude variations in light impinging upon said photocell, whose amplitude variations have spectral frequencies within a predetermined frequency range, and said filter circuit comprises a filter circuit configured to attenuate said photocell output signal outside said predetermined frequency range.

11. A receiver circuit according to claim 2, wherein said filter circuit is configured to filter signals arising from ambient conditions of daylight in said photocell output signal such that said signals arising from ambient conditions of daylight are substantially attenuated from said amplifier output signal.

12. A receiver circuit according to claim 2, wherein said filter circuit is configured to substantially attenuate said photocell output signal where said photocell output signal comprises spectral frequencies that are less than 10 Hertz, and said filter circuit is configured to not substantially attenuate said photocell output signal where said photocell output signal comprises spectral frequencies above 50 Hertz.

13. A receiver circuit comprising:

a light detector arranged to provide an output signal based upon the intensity of detected light;

a first variable impedance load coupled to said light detector arranged to provide a low impedance load when said output signal comprises a signal of no interest, and provide a high impedance load when said output signal comprises a signal of interest;

a second variable impedance load coupled to said light detector arranged to provide a high impedance load when said output signal comprises said signal of no interest, and provide a low impedance load when said output signal comprises said signal of interest; and,

an amplifier arranged to amplify said output signal.

14. A receiver circuit according to claim 13, wherein said first variable impedance load comprises an operational amplifier having an inductive load in a feedback loop between an output of said operational amplifier and an input of said operational amplifier, and said light detector is coupled to said input of said operational amplifier.

15. A receiver circuit according to claim 13, wherein said second variable impedance load comprises a capacitor serially connected between said light detector and said amplifier.

16. A receiver circuit according to claim 13, wherein said light detector comprises a photocell having an anode coupled to ground potential, and a cathode coupled to said

first and second variable impedance loads, said photocell arranged to provide an output signal that varies in response to the intensity of light impinging thereon.

17. A receiver circuit according to claim 16, further comprising a constant bias circuit coupled to said photocell wherein said photocell is maintained at a substantially constant reverse voltage by said constant bias circuit irrespective of the value of said output signal generated by said photocell.

18. A receiver circuit according to claim 17, wherein said constant bias circuit comprises an operational amplifier having a non-inverting input coupled to a bias voltage, and a non-inverting input coupled to said cathode of said photocell.

19. A receiver circuit according to claim 18, wherein said first variable impedance load comprises an inductor in a negative feedback loop between said inverting input and an output of said operational amplifier.

20. A receiver circuit according to claim 13, wherein said output signal of said light detector is proportional to the intensity of light impinging thereon.

21. A receiver circuit comprising:

a photocell having a cathode and an anode, said anode coupled to ground potential;

a first operational amplifier having:

a non-inverting input coupled to a first reference voltage;

an inverting input coupled to said cathode of said photocell; and,

an output coupled to said inverting input by a negative feedback loop, said negative feedback loop comprising an inductor;

a second operational amplifier having:

a non-inverting input coupled to a second reference voltage;

an inverting input; and,

an output coupled to said inverting input by a resistor; and,

a capacitor coupling said inverting input of said second operational amplifier to said cathode of said photocell.

22. A receiver circuit according to claim 21, further comprising a capacitor in parallel with said inductor in said negative feedback loop.

23. A receiver circuit comprising:

a light detector arranged to provide an output signal that varies based upon the intensity of light measured thereby;

a constant bias circuit arranged to supply a reverse voltage across said light detector, said reverse voltage remaining substantially constant irrespective of said output signal;

a first variable impedance load coupled to said light detector arranged to attenuate said output signal when said output signal comprises spectral frequencies outside a predetermined frequency range; and;

an amplifier arranged to amplify said output signal.

24. A receiver circuit according to claim 23, wherein said light detector comprises a capacitance, and said constant bias circuit is configured to maintain said capacitance of said light detector at a substantially constant value.

25. A receiver circuit according to claim 23, wherein the noise gain of said amplifier remains substantially constant irrespective of said output signal of said light detector.